

REMARKS

Claims 1-7, 9-12, 14, and 18-20 were pending in this application. With entry of this Amendment, claims 1, 19, and 20 are amended. Thus, claims 1-7, 9-12, 14, and 18-20 remain pending. Support for these claim amendments is found throughout the originally-filed specification and claims, see for example, paragraphs 8, 10, 16, the Examples, and other related teachings in the specification.

Rejection based on 35 U.S.C. § 102(b)

Claims 1-3 and 11 were rejected under 35 U.S.C. 102(b) as being anticipated by Jackson et al (J. of Horticultural Science 52:169-171, 1977). According to the Examiner, Jackson describes a method of regenerating a taro plant using a media containing IAA, kinetin, and octadecyl-polyethoxyethanol (OPE).

For a publication to anticipate a claim under §102(b), every element of the claim must be identically described in that publication. Jackson fails, however, to disclose every element of the presently amended claims. In particular, the present claims are drawn to methods of regenerating transgenic plants using dikegulac as the apical dominance inhibitor. Jackson does not teach or suggest the use of this inhibitor. As the cited prior art does not teach every element of the present claims, Applicants respectfully request that this rejection be withdrawn.

Rejection based on 35 U.S.C. § 103(a)

Claims 1-7, 9-12, 14 and 18 were rejected under 35 USC §103(a) as allegedly being unpatentable over Jackson et al. (1977), in view of George (Plant Propagation by Tissue Culture, pg. 469, 1993).

To establish a *prima facie* case of obviousness, there must be some suggestion or motivation to modify or combine the teachings of the cited prior art in the manner proposed by

the Examiner; there must be a reasonable expectation of success from so doing; and the prior art must teach or suggest all of the elements of the claim. M.P.E.P. §2143. As discussed in detail below, Applicants contend that the Examiner has failed to establish the elements necessary to support a *prima facie* case of obviousness. Thus, Applicants respectfully request that the rejection be withdrawn.

According to the Examiner, Jackson teaches “a method of regenerating a taro plant . . . on a medium containing . . . the apical dominance inhibitor octadecyl-polyethoxyethanol (OPE).” As the Examiner notes, Jackson describes a method of regenerating a monocotyledonous tropical bulb (taro) in a media that contains OPE. Jackson, however, describes OPE merely as a “surfactant” that failed to bring about callus formation, and in some cases, causes abnormal growth and proliferation; the publication does not teach or suggest the general use of apical dominance inhibitors in regeneration media. Moreover, Jackson’s teachings (concerning the growth regulation of a single species of a tropical monocotyledonous bulb) do not teach or suggest the use of that same OPE-containing media with other significantly different plants, such as perennial flowering dicots (*e.g.*, cotton). Additionally, Jackson does not teach the use of dikegulac with plant zygotic embryos, as recited in the present claims.

The combination with George does not account for these deficiencies in Jackson. George teaches that dikegulac, “when sprayed over entire plants, is capable of arresting the growth of apical buds,” and has been used “routinely for this purpose on pot azaleas.” As the Examiner notes, George refers to a single report in which an increased number of shoots from axillary buds of sweet cherries were observed in a shoot culture containing dikegulac. But these limited teachings concerning cherry shoots and azalea plants, when combined with Jackson’s discussion

of taro growth, do not teach or suggest the use of dikegulac to regenerate soybean or cotton plants from embryonic tissue.

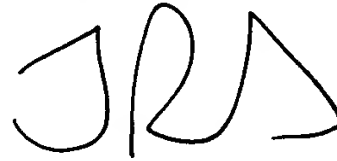
Lacking the requisite motivation, the skilled artisan would not be guided to modify or combine the cited prior art in the manner proposed by the Examiner. Nor would there be a reasonable expectation of success from so doing. At best, it might be “obvious to try.” But that is not the standard for obviousness. Thus, the Examiner has failed to establish a *prima facie* case of obviousness and the rejection should be withdrawn.

The Examiner also rejected claims 19 and 20 under 35 USC §103(a) as allegedly being unpatentable over Jackson et al., in view of Umbeck (U.S. Patent No. 5,004,863).

The deficiencies of Jackson’s teachings concerning growth of taro with OPE are described above. Umbeck teaches a method for transforming and regenerating cotton plants, but does not teach or suggest the use of dikegulac or the use of embryos as the explant. Thus, the proposed combination does not teach or suggest all the elements of the presently claimed invention (*e.g.*, use of dikegulac, regeneration from embryos etc). Additionally, there is no motivation to combine the teachings of Umbeck and Jackson at all. As noted above, Jackson describes the use of a surfactant (OPE) on the growth of taro. The skilled artisan, working to improve regeneration of cotton or soybean, would not be motivated to select an agent from among hundreds of possible growth-regulating compounds on the basis of OPE’s effects on taro plants. Moreover, there is no reasonable expectation of success in using a taro-growth-regulating compound in other divergent plant species, such as soybean or cotton. Again, the Examiner is proposing a combination that might be “obvious to try.” But this is not the standard. As the Examiner has failed to establish a *prima facie* case of obviousness, Applicants respectfully request that the rejection be withdrawn.

The applicant respectfully requests reconsideration on the merits of the application as a whole. The Examiner is encouraged to call the undersigned should any further action be required for allowance.

Respectfully submitted,

A handwritten signature in black ink, appearing to be 'JRS' or similar, written in a cursive style.

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